

# DKM-409

Network Analyzer with  
harmonic measurement and scopemeter

## FEATURES

- ❑ True RMS measurements
- ❑ Harmonic distortion display (to 31st harmonic) on both voltage & current
- ❑ Oscilloscope, waveform display
- ❑ Max demand display
- ❑ User configurable display screen
- ❑ Fully isolated RS-485 (MODBUS-RTU) serial port
- ❑ 2 relay outputs
- ❑ Energy pulse output configurable as alarms or pulse outputs
- ❑ Optically isolated, configurable digital inputs
- ❑ Switched dual active-reactive power counters
- ❑ Configurable user counters
- ❑ Voltage transformer ratio for MV applications
- ❑ Password-protected front panel programming
- ❑ High visibility, 128 x 64 pixel graphic LCD
- ❑ Reduced panel depth
- ❑ Wide operating temperature
- ❑ Sealed front panel (IP54)
- ❑ Plug-in connection system for easy replacement

## MEASUREMENTS

- ❑ Line-to-Line Volts: L1-L2, L2-L3, L3-L1
- ❑ Line-to-Neutral Volts: L1-N, L2-N, L3-N
- ❑ Line Currents: L1-L2-L3
- ❑ Active Power
- ❑ Reactive Power
- ❑ Apparent Power
- ❑ Power Factor
- ❑ Total Active Power:  $\Sigma P$
- ❑ Total Reactive Power:  $\Sigma Q$
- ❑ Total Apparent Factor:  $\Sigma S$
- ❑ Total Power Factor:  $\Sigma \cos$
- ❑ Active Power Counters: Pc1-Pc2
- ❑ Reactive Power Counters: Qc1-Qc2
- ❑ User Counters: USR1 - USR2 - USR3 - USR4
- ❑ 2 ... 31 Harmonics of any voltage or current



## DESCRIPTION

The DKM-409 is a precision instrument designed for displaying various AC parameters in 3-phase distribution panels.

Thanks to its isolated RS-485 MODBUS RTU communications port, the device is free from ground potential difference issues. Measured parameters are safely transferred to factory and building automation systems.

The power supply of the unit is isolated.

The graphic screen allows display of waveforms and harmonic analysis graphs.

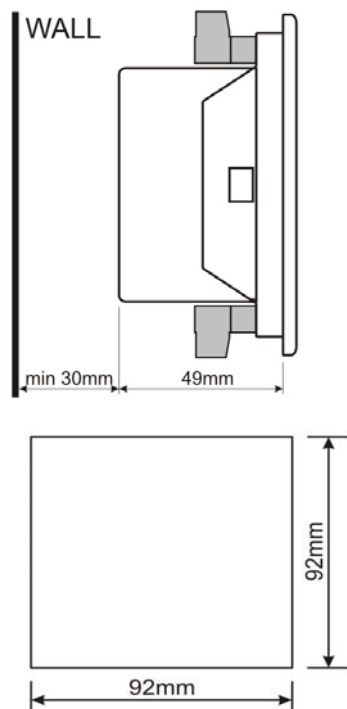
Various display screens can be scrolled automatically. The user configurable screen can be set to display any measured parameter, transforming the unit into a custom designed measurement panel.

The unit fits into a standard 96 mm DIN (92x92mm cutout) opening.

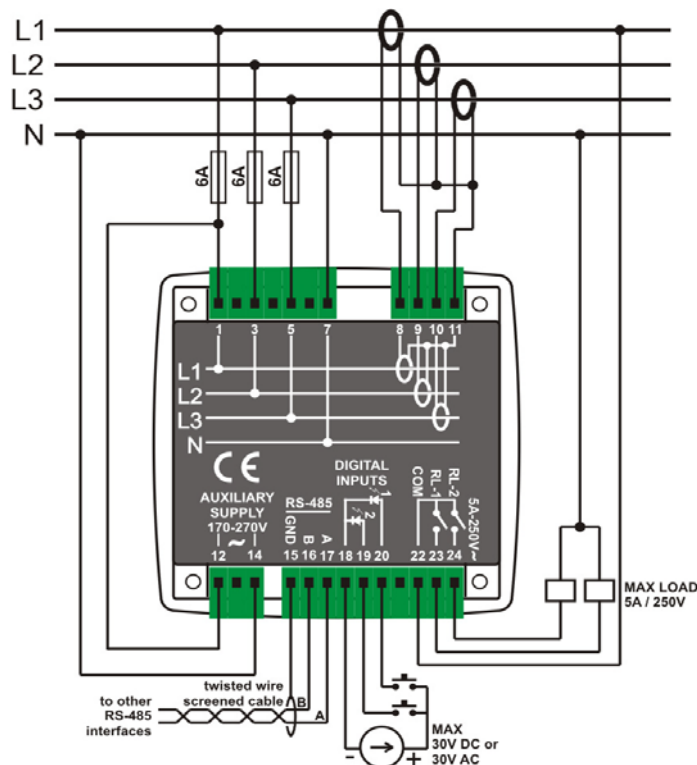
## TECHNICAL SPECIFICATIONS

<b>Power Supply Input</b>	170 - 275V,AC 50 - 60Hz nominal ( $\pm 10\%$ ) Different supply voltages available	<b>Digital Inputs</b>	<b>Active Level:</b> 5 to 30V,DC or AC <b>Min. Pulse:</b> 250 ms. <b>Isolation:</b> 1000V,AC, 1 minute
<b>Measurement Input Range</b>	<b>Voltage:</b> 10 - 300V,AC (L-N) 20 - 520V,AC (L-L) <b>Current:</b> 0.2 - 5.5A,AC <b>Frequency:</b> 30 - 100 Hz	<b>Serial Port</b>	<b>Signal Level:</b> RS-485 <b>Protocol:</b> Modbus RTU <b>Data Rate:</b> 9600 baud <b>Isolation:</b> 500V,AC, 1 minute
<b>Accuracy</b>	<b>Voltage:</b> 0.5% + 1 digit <b>Current:</b> 0.5% + 1 digit <b>Frequency:</b> 0.5% + 1 digit <b>Power (kW, kVA):</b> 1.0% + 2 digit <b>Power Factor:</b> 2.0% + 2 digit	<b>Operating Temperature</b>	-4°F to 158°F (-20°C to 70°C)
<b>Measurement Range</b>	<b>CT Range:</b> 5/5A to 5000/5A <b>VT Range:</b> 1.0/1 to 5000.0/1 <b>kW Range:</b> 1.0 kW to 50.0 MW	<b>Maximum Humidity</b>	95% non-condensing
<b>Power Consumption</b>	<4VA	<b>Degree of Protection</b>	IP 54 - front panel IP 30 - back panel
<b>Voltage Burden</b>	<0.1VA per phase	<b>Enclosure</b>	Non-flammable, ROHS compliant
<b>Current Burden</b>	<1VA per phase	<b>Installation</b>	Flush mounting with rear brackets
<b>Relay Outputs</b>	5A @ 250V,AC	<b>Dimensions</b>	4.01" W x 4.01" H x 2.09" D
		<b>Panel Cutout</b>	3.62" W x 3.62" H
		<b>Weight</b>	0.77 lbs.
		<b>Applied Standards</b>	<b>General:</b> LVD: 2006/95/EC EMC: 2004/108/EC <b>Safety:</b> Safety: EN61010 EMC: EN61326

### MOUNTING TOLERANCES AND PANEL CUTOUT



### TYPICAL CONNECTIONS



www.pc-s.com

For more information and certifications, please contact:

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